

REMARKS

Reconsideration and allowance of the above-identified application are respectfully requested. Claims 1-16, 18-24, 26-29 and 31 are now pending, wherein claims 7, 14, 19, 22 and 27 have been amended, and claims 17, 20, 23, 25, 28 and 30 have been canceled.

Applicants note with appreciation the Examiner's consideration of document EP 0 858 175. Applicants also appreciate the Examiner's withdrawal of various objections and rejections raised in the previous Office Action.

In paragraph 3 of the Office Action, the drawings are objected to as failing to comply with 37 C.F.R. §1.84(p)(5) because they include the reference sign "333" not mentioned in the description. The paragraph beginning on page 4, line 1 of the present application has been amended to refer to element 333 in Figure 3. Accordingly, withdrawal of this objection is respectfully requested.

In paragraph 4 of the Office Action, claim 7 is objected to because the dependency of this claim differs between the clean version and the marked-up version in Applicants' Amendment filed on March 4, 2002. Accordingly, as suggested in this paragraph, claim 7 has been amended to indicate that it is dependent upon claim 5. Accordingly, withdrawal of this objection is respectfully requested.

In paragraph 5 of the Office Action, claims 25 and 30 are objected to under 37 C.F.R. §1.75(c), as allegedly being of improper dependent form for failing to further limit the subject matter of a previous claim. This objection is respectfully traversed.

Claims 25 and 30 have been canceled. However, claim 22 has been amended to include the step recited in claim 23 (claim 23 reciting a step of updating the second set of

paths without updating the first set of paths), and claim 24 depends from amended claim 22 (claim 24 reciting the step of updating the second set of paths while updating the first set of paths). Similarly, claim 27 has been amended to include the subject matter of claim 28 (claim 28 reciting the step of updating the second set of paths without updating the first set of paths), and claim 29 depends from amended claim 27 (claim 29 reciting the step of updating the second set of paths while updating the first set of paths). Accordingly, Applicants will address this objection.

The objection to claims 25 and 30 is based upon an assertion that the step of "updating the second set of paths without updating the first set of paths" is an alternative to the step of "updating the second set of paths while updating the first set of paths," and hence, this second step does not further limit the independent claims. Specifically, the Office Action states that the "step of updating the second set of paths *while updating* the first set of paths does not further limit the step of updating the second set of paths *without updating* the first set of paths."

It is respectfully submitted that 37 C.F.R. §1.75(c) does not require that a dependent claim further *limit a step* in an independent claim as asserted in the Office Action. Instead, 37 C.F.R. §1.75(c) states that "[o]ne or more claims may be presented in dependent form, referring back to and further limiting another claim." It is respectfully submitted that the step of "updating the second set of paths while updating the first set of paths" as recited in dependent claim 29 does further limit independent claim 27 which recites the step of "updating the second set of paths without updating the first set of paths." Specifically, claim 27 recites a method for configuring a RAKE receiver. As discussed on

page 5, lines 1-4 of the present application, "The second stage can generate new sets of N paths while the first stage is either active or inactive. The third stage can use a quality signal of a counter to notify the first stage and/or the second stage to generate new sets of paths." Moreover, the Abstract of the present application, at lines 13 and 14, states that "the selector can generate new sets of N paths while the searcher is either active or inactive." Accordingly, it is respectfully submitted that the present application describes methods in which at one time the second set of paths can be updated without updating the first set of paths, and at other times during the method the second set of paths are updated while updating the first set of paths. Since a method can include both of these steps, it is respectfully submitted that the objection to claims 25 and 30 is improper. Accordingly, withdrawal of this objection is respectfully requested.

In paragraph 7 of the Office Action, claims 1-7, 14, 15, 19-22, 24, 26, 27, 29 and 31 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,222,834 to Kondo ("Kondo"). This ground of rejection is respectfully traversed.

Kondo does not anticipate Applicants' claim 1 because Kondo does not disclose all of the elements of Applicants' claim 1. Specifically, Kondo does not disclose "a first stage, the first stage configured to use an input signal to find a set of more than N paths" and "a second stage, the second stage configured to use the first set of more than N paths and the input signal to generate a set of N paths," wherein N corresponds to the number of fingers in a RAKE receiver.

Kondo discloses a spread spectrum communication receiver. The receiver of Kondo includes a searcher section 120 which detects correlation peaks in a search range. A path

capturing/holding section 150 designates paths which are tracked by tracking section 130. A correlation demodulation path selection section 160 removes paths which are detected without any correlation component from the tracking paths and provides the remaining paths to RAKE section 140. However, Kondo does not disclose a relationship between the number of fingers in RAKE section 140 and the number of paths detected by searcher section 120 or tracked by tracking section 130. Since Kondo does not disclose a relationship between the number of paths searched for or tracked by the receiver with respect to the number of fingers of the RAKE section, Kondo cannot disclose "a first stage, the first stage configured to use an input signal to find a set of more than N paths" or "a second stage, the second stage configured to use the first set of more than N paths and the input signal to generate a set of N paths," wherein N corresponds to the number of fingers in a RAKE receiver. Moreover, the Office Action does not address the relationship between the number of fingers in RAKE section 140 and the number of paths searched for or tracked in the receiver of Kondo. Accordingly, Kondo does not anticipate Applicants' claim 1.

Claims 2-7 depend from claim 1, and are, therefore, not anticipated by Kondo for at least those reasons stated above with regard to Applicants' claim 1.

Claim 14 has been amended to include the elements of claim 17. The Office Action acknowledges that Kondo does not disclose the elements of Applicants' claim 17. Accordingly, it is respectfully submitted that Kondo does not anticipate amended claim 14.

Claim 15 depends from claim 14, and hence, Kondo does not anticipate Applicants' claim 15 for at least those reasons stated above with regard to Applicants' claim 14.

Kondo does not anticipate Applicants' claim 19 because Kondo does not disclose all of the elements of Applicants' claim 19. Specifically, Kondo does not disclose that "the set of candidate paths containing M paths" and that "the selector comprising $k \cdot M$ correlators, the selector configured to use $k \cdot M$ correlators to generate M estimates," as recited in Applicants' claim 19. Kondo does not disclose the number of candidate paths produced by searcher section 120 with respect to a number of correlators comprised in the tracking section 130. Nevertheless, the Office Action asserts that if k equals 1, then Kondo discloses the tracking section containing $k \cdot M$ correlators. If this ground of rejection is maintained, Applicants respectfully requests a citation to Kondo where a disclosure of the relationship between the number of candidate paths used by searcher section 120 with regard to the number of correlators in tracking section 130. Since Kondo does not disclose all of the elements of Applicants' claim 19, Kondo does not anticipate Applicants' claim 19. Claim 21 depends from claim 19, and hence, is not anticipated by Kondo for at least those reasons stated above with regard to Applicants' claim 19.

Claim 22 has been amended to include the elements of Applicants' claim 23, and claim 27 has been amended to include the elements of claim 28. As acknowledged by the Office Action, Kondo does not disclose the elements of Applicants' claims 23 or 28. Hence, Kondo does not anticipate Applicants' amended claims 22 and 27. Accordingly, withdrawal of the rejection of these claims is respectfully requested.

Claims 24, 26, 29 and 31 depend from Applicants' claims 22 and 27, and are, therefore, not anticipated by Kondo for at least those reasons stated above with regard to their respective independent claims.

For at least those reasons stated above, it is respectfully requested that the rejection of claims 1-7, 14, 15, 19-22, 24, 26, 27, 29 and 31 as allegedly being anticipated by Kondo be withdrawn.

In paragraph 9 of the Office Action, claims 8, 10, 16 and 18 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over the combination of Kondo and U.S. Patent No. 6,269,075 to Tran ("Tran"). This ground of rejection is respectfully traversed.

Claims 8 and 10, and claims 16 and 18, respectively, depend from independent claims 1 and 14. As discussed above with regard to claims 1 and 14, Kondo does not disclose all of the elements of these claims. Moreover, it is respectfully submitted that Tran does not overcome the above-identified deficiencies of Kondo with respect to Applicants' claims 1 and 14. Accordingly, it is respectfully submitted that the combination of Kondo and Tran does not render Applicants' claims 8 and 10, and 16 and 18, which respectively depend from claims 1 and 14, unpatentable. Accordingly, withdrawal of this rejection is respectfully requested.

In the tenth paragraph of the Office Action, claims 9 and 17 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over the combination of Kondo, Tran and U.S. Patent No. 5,799,256 to Pombo et al ("Pombo"). This ground of rejection is respectfully traversed.

Claim 17 has been canceled, thereby rendering this ground of rejection moot. As discussed above with regard to Applicants' claim 8, the combination of Kondo and Tran does not disclose or suggest all of the elements of Applicants' claim 1. Moreover, it is respectfully submitted that Pombo does not remedy the above-identified deficiencies of the

combination of Kondo and Tran with respect to Applicants' claim 1. Accordingly, claim 9, which depends from claim 8 which depends from claim 1, is patentably distinguishable over the combination of Kondo, Tran and Pombo for at least those reasons stated above with respect to Applicants' claim 1. Accordingly, withdrawal of this rejection is respectfully requested.

In the eleventh paragraph of the Office Action, claims 11-13, 23, 25, 28 and 30 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over the combination of Kondo and Pombo. This ground of rejection is respectfully traversed.

Claims 11-13 depend from Applicants' claim 1. As discussed above, Kondo does not disclose all of the elements of Applicants' claim 1. Moreover, it is respectfully submitted that Pombo does not remedy the above-identified deficiencies of Kondo with respect to Applicants' claim 1. Accordingly, the combination of Kondo and Pombo does not render Applicants' claims 11-13, which depend from claim 1, unpatentable.

The subject matter of Applicants' claim 23 has been incorporated into Applicants' claim 22, and claim 23 has been canceled. The combination of Kondo and Pombo does not render Applicants' claim 22 unpatentable because the combination does not disclose or suggest all of the elements of Applicants' claim 22. For example, the combination of Kondo and Pombo does not disclose or suggest the step of "updating the second set of paths without updating the first set of paths."

The Office Action acknowledges that Kondo does not disclose such a step. Instead, the Office Action relies upon Pombo. Specifically, the Office Action relies upon the

disclosure in column 5, lines 38-42 of Pombo as allegedly disclosing "a searcher that may be set to a low-power mode when not searching."

Pombo discloses a battery saving method and communication device using prediction of user location, movement and action. It is noted that Pombo does not disclose or suggest that the communication device is arranged to perform CDMA communications, or that it includes a searcher section such as the one disclosed in Kondo. The section cited by the Office Action describes that when the mobile station is not searching for a control channel the mobile station will remain in a low-power sleep mode. However, Pombo does not disclose or suggest that while in the low-power sleep mode a searcher may be set to a low-power mode as asserted by the Office Action while the tracker continues to track paths. Accordingly, the combination of Kondo and Pombo does not disclose or suggest the step of "updating the second set of paths without updating the first set of paths" as recited in Applicants' claim 22.

Claim 27 has been amended to include similar subject matter to that discussed above with regard to Applicants' claim 22. Accordingly, the combination of Kondo and Pombo does not render Applicants' claim 27 unpatentable for similar reasons to those discussed above with regard to Applicants' claim 22.

Accordingly, Applicants respectfully request that the rejection of claims 11-13, 23, 25, 28 and 30 as allegedly being unpatentable over the combination of Kondo and Pombo be withdrawn.

All outstanding objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance. Notice to this effect is earnestly solicited. If there are any questions regarding this response, or the application in general, the Examiner is encouraged to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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Attachment to Amendment dated November 22, 2002

Mark-Up of Specification

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Paragraph beginning on page 4, line 1

Similarly, input signal 112 can be correlated in finger 322 with a chip sequence 323 that has a phase corresponding to T_{10} ; in finger 330 with a chip sequence 331 that has a phase corresponding to T_5 ; and in finger 332 with chip sequence(s) 333 having a phase corresponding to T_{15} . The finger outputs are multiplied by individual weights 340, 342, 350, and 352 to maximize the received signal-to-noise-and-interference ratio. The weighted outputs are then added by an accumulator 362. The output of the accumulator 362 is fed to a threshold device 364, or to a quantizer that outputs soft information.



Attachment to Amendment dated November 22, 2002

Marked-Up Claims

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7. (Twice Amended) An apparatus as described in claim [1] 5, the second stage configured to derive the new set of N paths from the first set of more than N paths.

14. (Amended) An apparatus for configuring a RAKE receiver, the apparatus comprising:

an input signal;

a searcher, the searcher configured to use the input signal to find a set of candidate paths; and,

a selector, the selector configured to use the input signal and the set of candidate paths to select a subset of candidate paths that are used to configure the RAKE receiver, the selector configured to generate a new subset of paths while the searcher is inactive.

19. (Amended) An apparatus for configuring a RAKE receiver, the apparatus comprising:

an input signal;

a searcher, the searcher configured to use the input signal to find a set of candidate paths, the set of candidate paths containing M paths; and

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Marked-Up Claims

a selector, the selector configured to use the input signal and the set of candidate paths to select a smaller set of candidate paths, the selector comprising $k \cdot M$ correlators,
the selector configured to use $k \cdot M$ correlators to generate M estimates.

22. (Twice Amended) A method for configuring a RAKE receiver, the method comprising the steps of:

finding a first set of paths;
searching the first set of paths to generate a first set of correlation values; [and]
selecting a second set of paths from the first set of paths based on a second set of correlation values; and
updating the second set of paths without updating the first set of paths.

27. (Amended) A method for configuring a RAKE receiver, the method comprising the steps of:

receiving an input signal;
finding a first set of paths;
searching the first set of paths to generate a set of correlation values; [and]
selecting a second set of paths from the first set of paths based on the correlation values and the input signal; and
updating the second set of paths without updating the first set of paths.